

# bench assessment final

*by* Christy Lee

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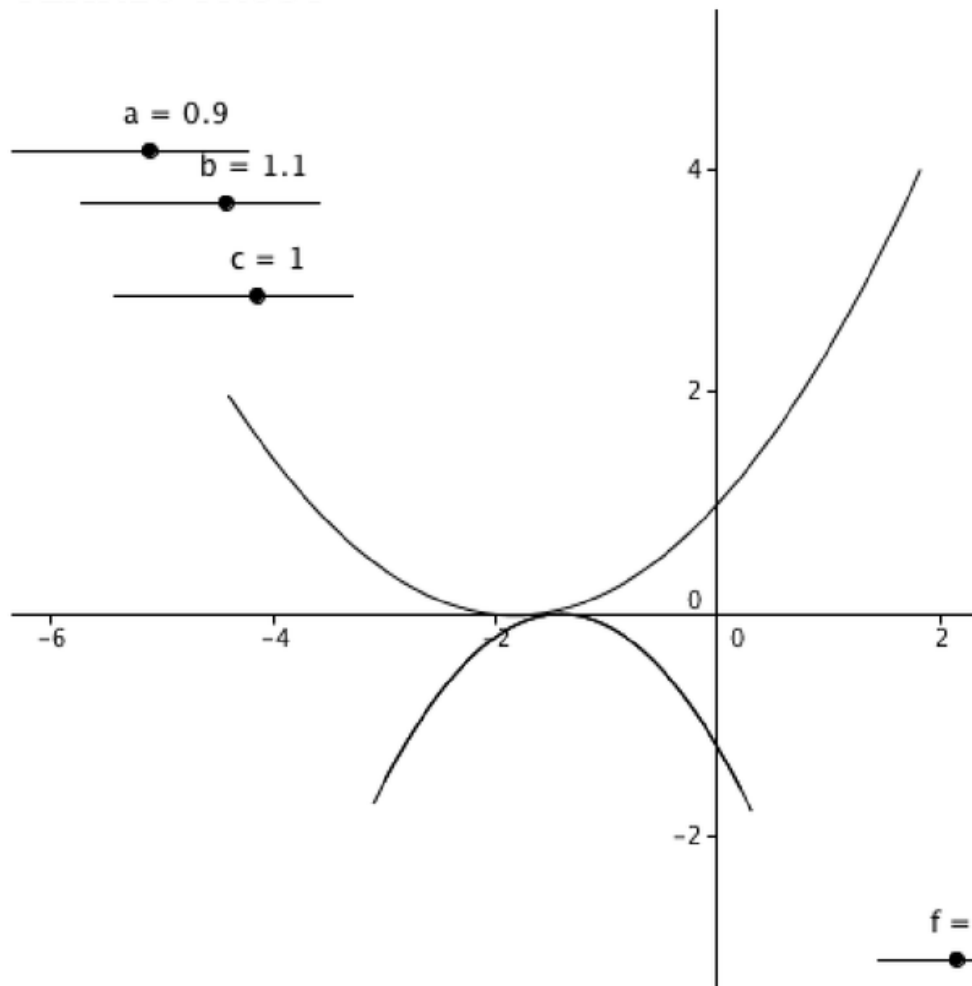
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# BENCH DESIGN ASSESSMENT

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YEAR10 TRUST



## Introduction

In this unit, I'm going to make a bench by using the equation. I'll design a bench that for the readers, so I will put the bench to the reading room. The reason that I create this bench is because when I reading at home the chair made me feel uncomfortable, so I want to create the bench that can make the reader feeling better. The condition of my bench needs to be soft and the slope needs to be the right amount. So, I'm going to do the research and draw one of the designs. In this assessment, there got A and D criterions.

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Research (bench)



**HENRIKSDAL**  
扶手椅椅套  
**\$1,195**

商品特色

- 椅套可輕鬆安裝、拆下

the width of this bench is 25cm, it's  
high 100cm, long 60cm and the weight is 5.9kg.(1)



**POÄNG** 搖椅  
**\$3,695**

寬度: 68 公分, 深度: 94 公分, 高度: 95 公分  
更多選擇

The width of this bench is 68cm, high 95cm,  
long 40cm and the weight of it is 9kg (2)

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**ARVIKA** 旋轉扶手椅

**\$17,900**

The width of this bench is 84cm, the high is 110cm, long 40cm and the weight is 20kg.



**STORSELE** 高背扶手椅

**\$890**

闊度: 69 厘米, 深度: 78 厘米, 高度: 100 厘米

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the width of this bench is 69cm, high 100cm and the weight is 19kg. (5)



**KARLSKRONA** 躺椅  
**\$4,995**

and the weight is 10kg. (4)

The width is 50cm, the high is 90cm, long 40cm

Research(function)

The c curves:  $y=x^c$

The d curves:  $y=1x^d$

The e curves  $y=0$

The f curves:  $y=x^f$

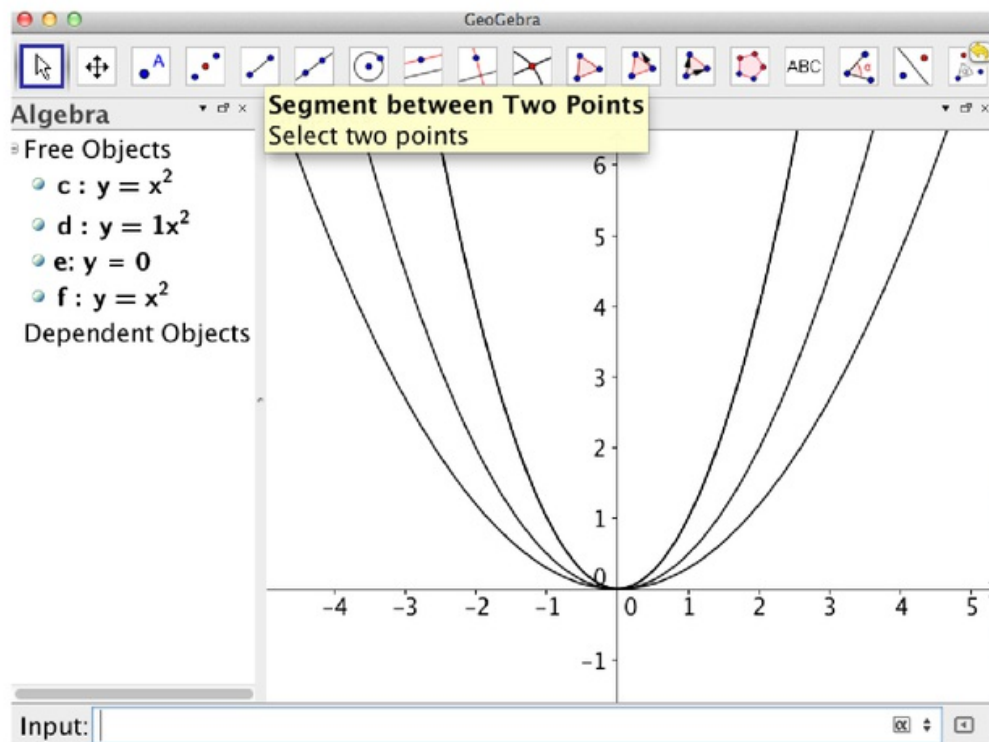
When a,b,c is a constant

$$F(x)=ax^b+bx+c$$

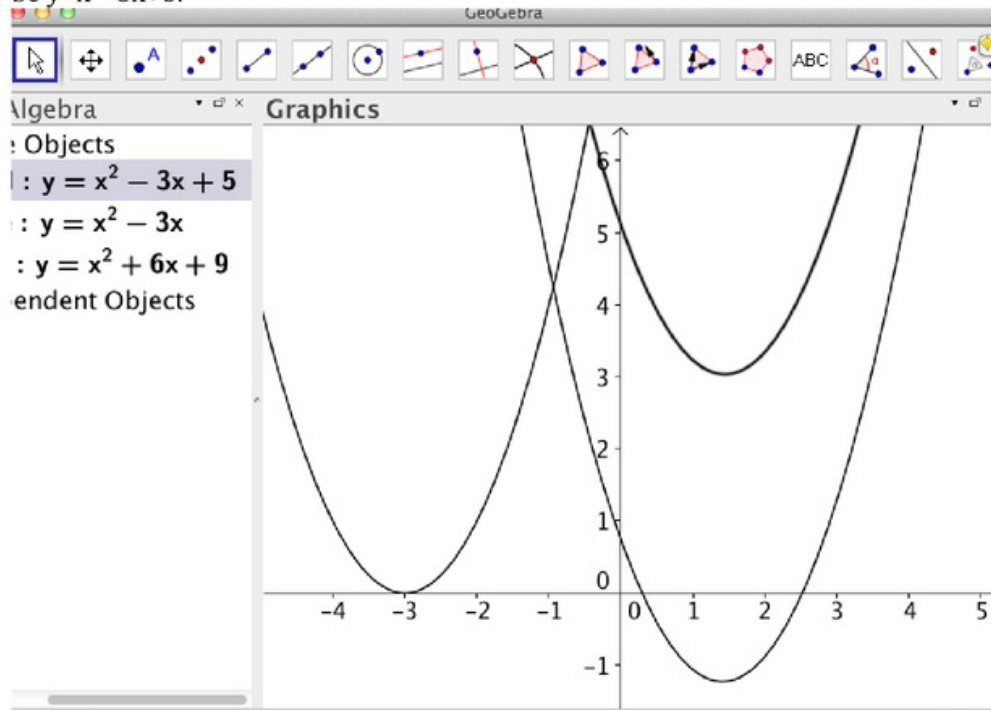
Circle:  $(x-h)^2+(y-k)^2=r^2$

Straight line:  $y=mx+c$  or  $f(x)=mx+c$

In this unit we are going to make a graph, and it shows the equation of 0.5  
( $y=1x^{0.5}$ ) and 0.3 is more bigger than the the  $y=x^{0.3}$

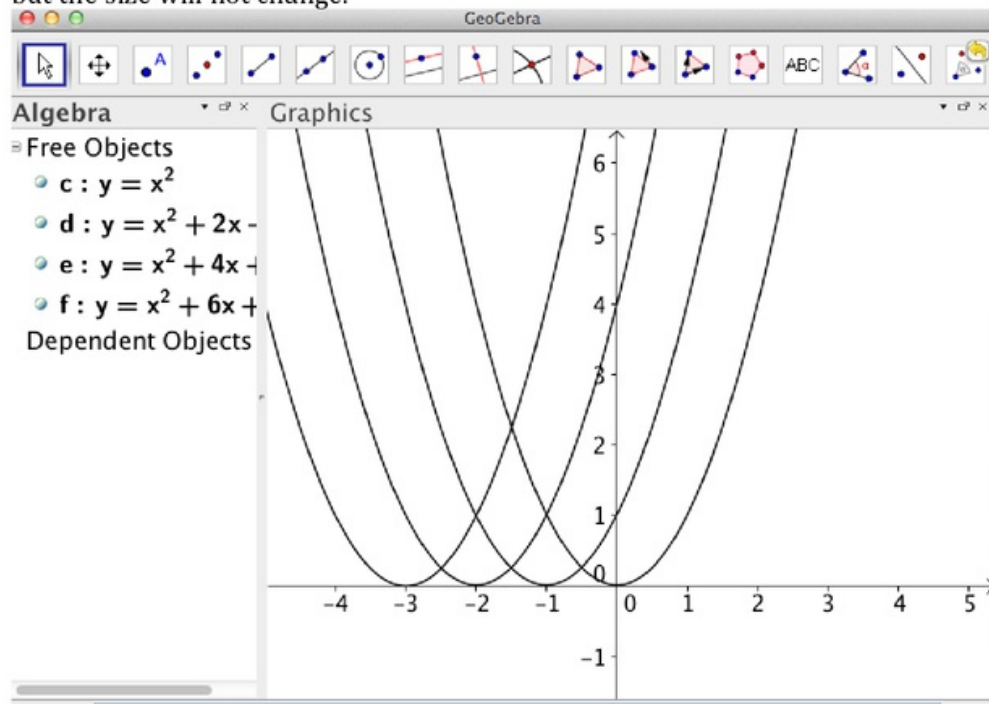


In this graph, it shows that if you move the curves the equation will change. For example the e curves ( $y=x^2+2x$ ) if I move this curves the equation will change to be  $y=x^2-3x+5$ .



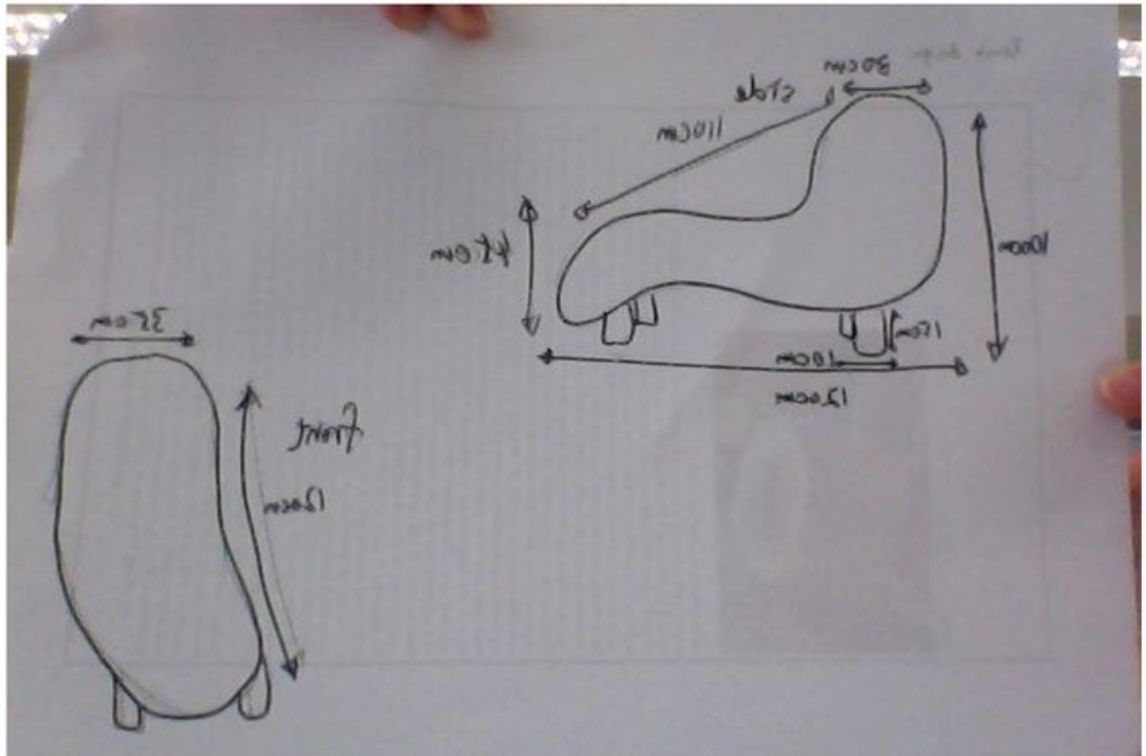


In this graph shows that the curves were all the same just because all of the equation just added a number it shows the curves will only go to different place but the size will not change.

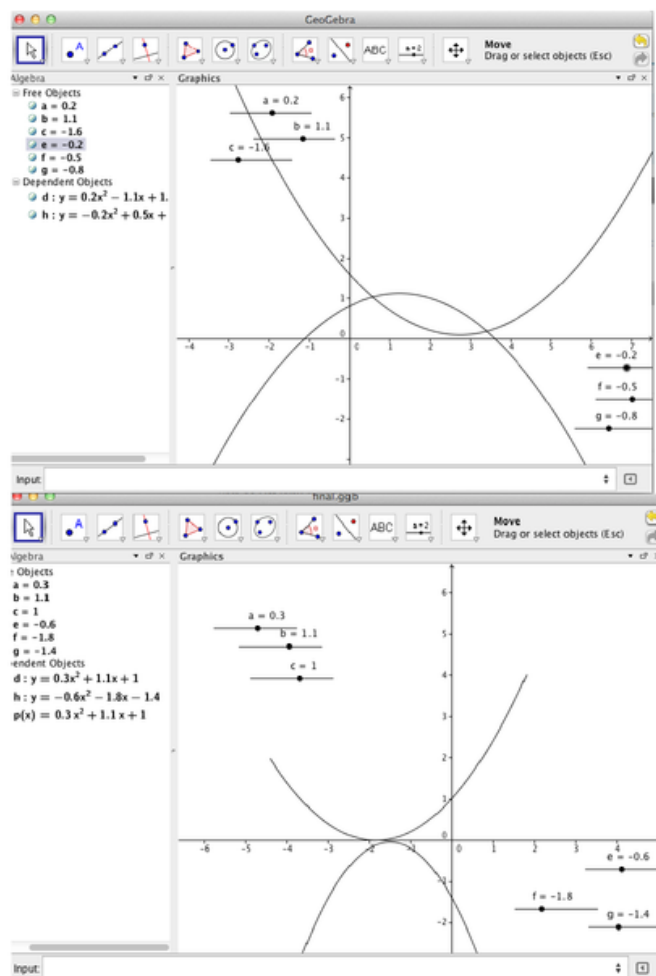


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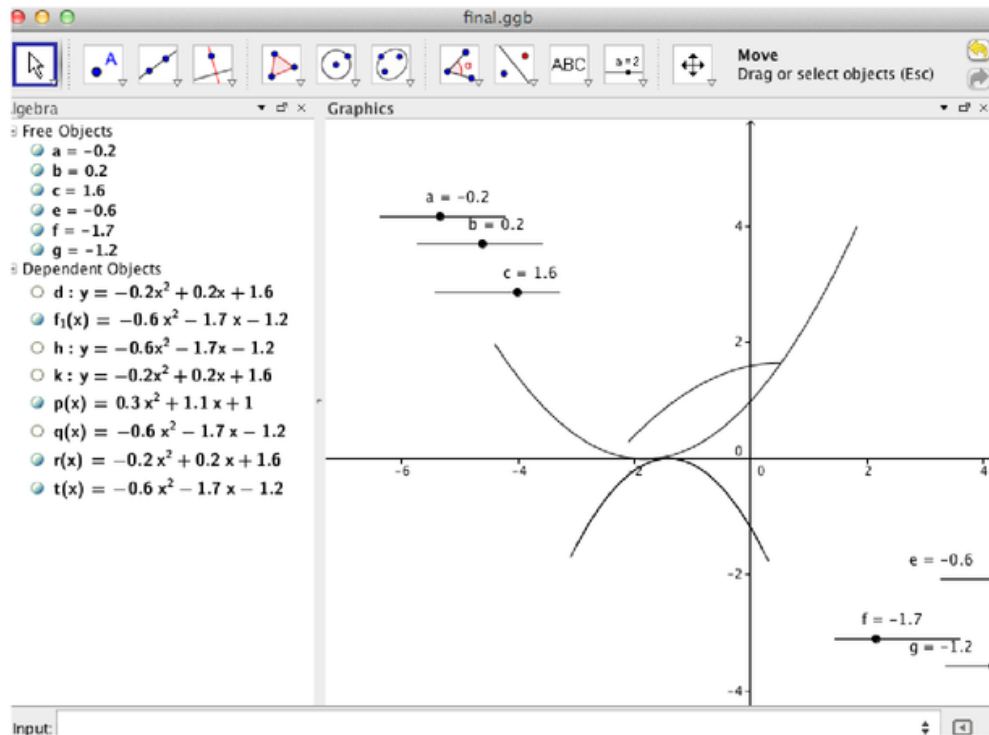
Design of the bench.



Today's lesson, I found out that the graph could change the curves. The equation of my beach was  $y = a \cdot x^2 + b \cdot x + c$ . The equation will be change to  $0.3x^2 + 1.1x + 1$ . Also it needs to point out that  $a=1$   $b=1$   $c=1$ , and there will appear three dots. You can move the dot, so that your curves will be change. Also I learned how to cut the curves by using the calculator. If you want to cut the curves, you need to found the  $y$  is in which number, and the calculator will help you to count out what is the  $x$  equals to. So, you can change the number in the equation.



This is my final bench, it using the the  $y=a*x^2+b*x+c$ . when I cut the curves the function will be  $\text{Function}[-0.6x^2 - 1.7x - 1.2, -3.1, 0.2]$ . And the other curves will be  $\text{Function}[0.3x^2 + 1.1x + 1, -4.4, 1.82]$ . The handle was  $y=a*c^2+b*x+c$ , but the handle needs to be cut, so the function was  $[-0.2x^2 + 0.2x + 1.6, -2.1, 0.5]$ .



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#### Reflection

In this unit, I created a bench for readers. But in the explain part was not clear. I didn't mention how the curves came out and what is their equation. Research part needs to be more details for finding the information. Also not giving enough information to prove how to made this bench. I didn't tell the bench's equation how to transform. Hope in the next assessment can improve the explain part and more information to support.

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GRADEMARK REPORT

FINAL GRADE  
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